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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,617	10/22/2001	Nader Mohsenian	M-11805 US	2999

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EXAMINER

YENKE, BRIAN P

ART UNIT PAPER NUMBER

2614

DATE MAILED: 09/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/027,617

Applicant(s)

MOHSENIAN, NADER

Examiner

BRIAN P. YENKE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 33-36, 46-48 and 58-60 is/are rejected.
- 7) ☒ Claim(s) 4-32, 37-45, 49-57 and 61-69 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. Claims 8-11 and 13-14 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from another multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 8-11 and 13-14 have not been further treated on the merits.

Claims 6, 20 and 21 are objected to because of the following informalities: the claims must state "according to claims a or b" or "as in anyone of claims a, b...". Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 34-36, 46-48 and 58-60 are rejected under 35 U.S.C. 102(e) as being anticipated by Handjojo et al., US 2002/0171759.

In considering claims 34 and 46,
a-b) the claimed determining a probability of a first image component of a field...is met by motion estimator 244 which predicts the amount of motion between two images

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using a 3D technique where the amount of motion is predicted (probability) to be static (non-moving), slow moving or fast moving (page 6, para 75).

In considering claims 35-36, 47-48 and 59-60,

Handjojo discloses the use of a an adaptive filter 246 which is used to provide the necessary interpolation based upon the detected motion, where the detected motion is based upon the image being static, slow moving or fast moving (where static and moving meets the limitation regarding the first/second image components). Regarding the claimed modulated (as defined by applicant's specification modulated is scaled, not a conventional modulated (coded) signal, thus the rejection is based upon the applicant's definition of the term) image and the sum of the modulated image components is met by adaptive filter 246 which sums (via the different taps/coefficients of the filter) the motion analyzed blocks in order to provided an ideal deinterlaced signal.

In considering claims 58,

For limitations c, d refer to claims 34 and 36 above.

Regarding the processor (limitation a), Handjojo discloses the use of a video display processor chip, thus meeting the claimed processor (page 11, para 154). Regarding the claimed memory (limitation b), Handjojo discloses (page 15, para 216), that problems with prior art motion techniques is the use of more/extra memory, which renders them infeasible, thus Handjojo does disclose the use of a memory.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Handjojo et al., US 2002/0171759.

In considering claims 1-3,

The claims are rejected for the same reasons as stated above with respect to claims 34-36, respectively.

However Handjojo does not explicitly recite the determining the image component where the component is texture.

Handjojo does disclose the motion prediction (probability) of image blocks based and their contribution to the interpolated deinterlaced image based upon the components being, static, slow-moving or fast-moving.

The detection/determining of a texture component is conventional in the art, since the texture of a signal may also be an indicator of motion in determining the difference between blocks/fields/frames of an image, thus the examiner takes "OFFICIAL NOTICE" regarding this conventional feature.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Handjojo which discloses the deinterlacing of a video signal by detecting the amount of motion between blocks of a field/frame, where the amount of motion is ascertained by analyzing the content of the block in order to determine motion as being static (zero), slow moving or fast moving, by also analyzing

the texture of the image to further confirm/predict the possibility of motion (or not) between the compared components.

In considering claim 33,

Handjojo discloses that motion is compared by analyzing various blocks (multiple/dual stage) within a field/frame.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Yenke whose telephone number is (703) 305-9871. The examiner work schedule is Monday-Thursday, 0730-1830 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, John W. Miller, can be reached at (703)305-4795.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703)305-HELP.

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An automated message system is available 7 days a week, 24 hours a day providing informational responses to frequently asked questions and the ability to order certain documents. Customer service representatives are available to answer questions, send materials or connect customers with other offices of the USPTO from 8:30 a.m. - 8:00p.m. EST/EDT, Monday-Friday excluding federal holidays.

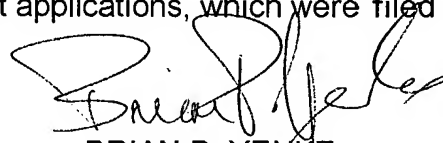
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General information brochures can also be obtained in person from the Patent Search Room located in Crystal Plaza 3, Room 1A03, 2021 South Clark Place, Arlington, VA 22202.


The Patent Electronic Business Center (EBC) allows USPTO customers to retrieve data, check the status of pending actions, and submit information and

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applications. The tools currently available in the Patent EBC are Patent Application Information Retrieval (PAIR) and the Electronic Filing System (EFS). PAIR (<http://pair.uspto.gov>) provides customers direct secure access to their own patent application status information, as well as to general patent information publicly available. EFS allows customers to electronically file patent application documents securely via the Internet. EFS is a system for submitting new utility patent applications and pre-grant publication submissions in electronic publication-ready form. EFS includes software to help customers prepare submissions in extensible Markup Language (XML) format and to assemble the various parts of the application as an electronic submission package. EFS also allows the submission of Computer Readable Format (CRF) sequence listings for pending biotechnology patent applications, which were filed in paper form.



BRIAN P. YENKE
Patent Examiner
Art Unit 2614



B.P.Y.
20 Sep 04